Washington State Department of Health

Office of Immunization and Child Profile
VACCINE ADVISORY COMMITTEE
Clinical Guidance on Use of Flu Vaccines
when Multiple Flu Products are Available
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During the 2014–2015 influenza season, multiple formulations of influenza vaccine will be available from a variety of manufacturers, including live attenuated and inactivated vaccines, trivalent and quadrivalent vaccines, and vaccines produced using egg-based, cell culture and recombinant methods. At its June 2014 meeting, the Advisory Committee on Immunization Practices (ACIP) recommended a preference for the use of Live Attenuated Influenza Vaccines (LAIV) for children ages 2 through 8 years. Studies indicate that live and inactivated influenza vaccines perform differently relative to each other in children, young adults and older adults. ACIP currently does not recommend a preference for live or inactivated influenza vaccine in older children or adults.

The Washington State Vaccine Advisory Committee provides the following clinical guidance to providers on the use of flu vaccine when multiple types of vaccine are available. Nothing in this guidance is intended to supersede the recommendations from the ACIP.[1] Providers should review the complete CDC guidance for use of seasonal influenza vaccines for additional details regarding available vaccine products and indications, including use of vaccines in patients with egg-allergies.

All individuals six months of age and older should receive influenza vaccine. Influenza vaccination should not be delayed to get a specific vaccine preparation if an appropriate one is already available.

Live Attenuated Vaccine (LAIV – Trade name: FluMist) vs. Inactivated Vaccine (IIV):

Both IIV and LAIV have been demonstrated to be effective in children and adults. Several studies have demonstrated superior efficacy of LAIV in children.[2] However, most comparative studies in adults have demonstrated either that LAIV and IIV were of similar efficacy or IIV was more efficacious.

- LAIV should be used for healthy children aged **2 through 8 years** who have no contraindications or precautions.
- If LAIV is not immediately available, IIV should be used. Vaccination should not be delayed in order to get LAIV.

Quadrivalent vs. Trivalent Vaccine:

Quadrivalent flu vaccine includes an additional B strain of the flu virus. **This provides additional protection against the flu when the additional influenza B strain is circulating in the community.** It is not possible to predict in advance which influenza strains will be in circulation.

- If both quadrivalent and trivalent vaccine is available, a provider should consider using quadrivalent vaccine for anyone for whom the vaccine is indicated.
- Vaccination should not be delayed if only trivalent vaccine is available.

Standard vs. High-Dose Flu Vaccine for Adults 65 Years of Age and Older:

Fluzone High Dose is a flu vaccine containing a higher dose of antigen and is FDA-approved for use in persons 65 years of age and older. The vaccine produces higher antibody levels in older adults. A recently published study compared the efficacy of standard- vs. high-dose influenza vaccine in non-institutionalized adults.[3] The high-dose vaccine had 24% greater efficacy against any laboratory-confirmed influenza infection than standard-dose flu vaccine; 1.4% of participants receiving high-dose vaccine and 1.9% of participants receiving standard-dose vaccine developed laboratory-confirmed influenza during the 2011-2012 and 2012-2013 seasons.[3] Based on this study, the high-dose vaccine would prevent about 5 fewer cases of laboratory-confirmed influenza for every 1000 people vaccinated.

It is important to note that during the first year of the study influenza activity was low[4] and during the second year of the study there was a mismatch between circulating influenza viruses and seasonal vaccine strains.[5] Therefore, results may differ during future influenza seasons, including more severe influenza seasons and seasons where the vaccine strains are better matched to circulating viruses. In addition, the study did not include residents of long term care facilities and was not able to determine the impact of high-dose vaccine on more significant health outcomes such as pneumonia and hospitalization.

Based on the available data, use of high-dose influenza vaccine is reasonable in adults 65 years of age and older for whom it is not contraindicated.

- At this time, ACIP expresses no preference for the use of standard or high-dose flu vaccine in adults 65 years and older.[1]
- The safety profile of high-dose vaccine is similar to that of regular flu vaccines. Some adverse events (which are also reported after regular flu vaccines) have been reported more frequently after vaccination with high-dose vaccine. The most common adverse events have been mild and temporary, and include pain, redness and swelling at the injection site, headache, muscle aches, fever and malaise. Most people had minimal or no adverse events after receiving the high-dose vaccine.

References

[1] CDC. Prevention and control of seasonal influenza with vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP)—Unites States, 2014–15 influenza season. MMWR 2014; 63(32):691-697. (http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6332a3.htm)

[2] ACIP Presentation – "Effectiveness of live-attenuated vs inactivated influenza vaccines for healthy children (GRADE)" (http://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2014-02/05-Flu-Grohskopf.pdf)

[3] DiazGranados CA, Dunning AJ, Kimmel M, et al. Efficacy of high-dose versus standard-dose influenza vaccine in older adults. N Engl J Med 2014; 371:635-645. (http://www.nejm.org/doi/full/10.1056/NEJMoa1315727)

[4] CDC. Update: influenza activity — United States, 2011–12 season and composition of the 2012–13 influenza vaccine. MMWR 2012;61:414-20. (http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6122a4.htm)

[5] Skowronski DM, Janjua NZ, De Serres G, et al. Low 2012–13 influenza vaccine effectiveness associated with mutation in the egg-adapted H3N2 vaccine strain not antigenic drift in circulating viruses. PLoS ONE 2014;9(3):e92153. (http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0092153)